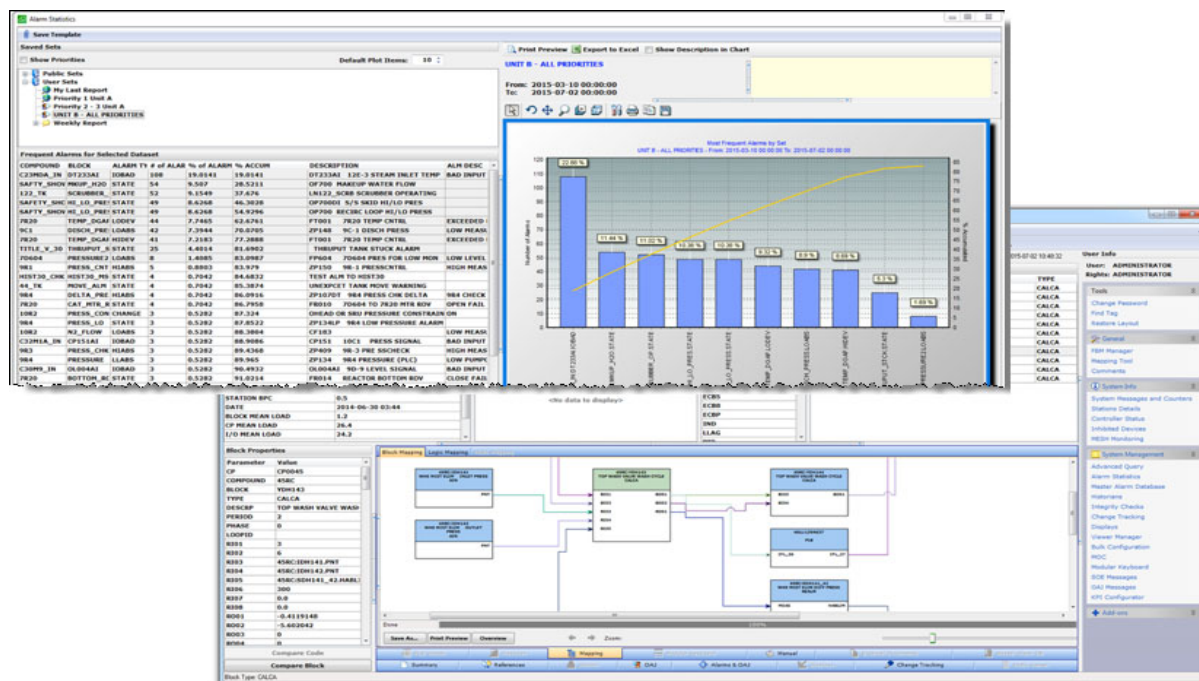


System Auditor



In many industries, plant operations require that the staff have positive knowledge of the control system's configuration and have access to important information, such as alarms, operator actions, and system health. System Auditor improves operational integrity and insight by adding enhanced configuration documentation, change tracking, alarm management, system health monitoring, and access to operator functions to all versions of the Foxboro distributed control system (DCS).

FEATURES

System Auditor provides these features:

- ▶ System Documentation
 - Provides extensive I/O documentation
 - Documents mismatched configurations
 - Documents block-to-block references, block-to-display references, and block-to-Historian references
- Documents HLBL/PLB logic, including indirect block references in HLBL code
- Provides graphical maps of block connections and flowcharts of HLBL code
- ▶ Change Tracking
 - Associates the current user to control station changes
 - Tracks control configuration change

- Tracks ladder logic and sequence logic changes made to primary and included files
- Tracks Operator Action Journal (OAJ) information
- Tracks sequence of events (SOEs) data
- ▶ Reporting
 - Stores historical information in the server database
 - Allows viewing of historical data by object type: activities, blocks, users, historians, displays, alarms, OAJs, and SOEs
 - Provides historical view by date and change
 - Allows customized views by filtering and sorting
 - Allows creation of custom reports that include multiple object types and filters.
- ▶ Alarm Management
 - Allows analysis of both alarm dynamics and alarm configuration
 - Provides documentation and rationalization features
 - Provides Key Performance Indicators (KPIs)
- ▶ I/O Management
 - Documents I/O
 - Finds spare I/O
 - Reserves I/O
- ▶ System Health Monitoring
 - Monitors control network traffic
 - Monitors system monitor messages
 - Monitors stations

- ▶ Integrity Checking
 - Checks for different types of mismatched configurations
- ▶ Advanced Queries
 - Provides standard queries
 - Allows for customized queries

BENEFITS

System Auditor enables you to:

- ▶ Reduce audit costs for regulatory compliance
- ▶ Reduce costs associated with managing documentation updates
- ▶ Map DCS blocks
- ▶ Improve DCS reliability
- ▶ Improve process performance
- ▶ Help ensure correct database configuration and optimize resource utilization and system performance

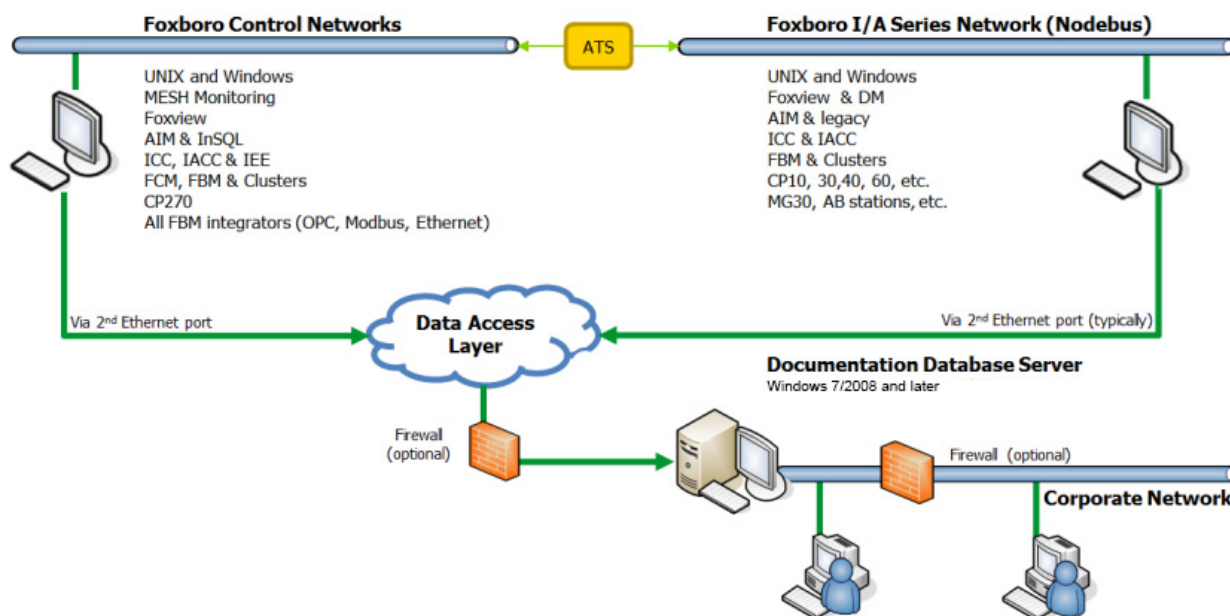


Figure 1. System Auditor Client-Server Architecture within the Foxboro Networks

ARCHITECTURE

System Auditor is based on a client server architecture. Information flows from the Foxboro control network stations to System Auditor.

REGULATORY POSITION

System Auditor is a response to practices required by FDA Regulation 21 CFR Part 11, OSHA 1910 and other regulations. These regulations require that changes made to the control system be documented and distributed to affected parties, especially to the process operators and their supervisors, and that access to the system be controlled and monitored.

Though System Auditor provides support for these regulations, it is not sufficient by itself to help ensure that any given installation is compliant.

Certification of any given installation as compliant is achieved not only through the application of hardware and software products, like System Auditor, but also through external review, internal procedures, and a variety of other mechanisms.

System Auditor is also a response to the Alarm Management recommendation, such as EMMUA and ISA 18.2.

SYSTEM AUDITOR SPECIFICATIONS

SYSTEM REQUIREMENTS

System Auditor is designed to operate with supported Foxboro Systems. System Auditor is PC-platform independent and is also supported in virtual environments that meet the minimum PC/Server requirements below.

System Auditor Server

Up to 35 Control Processors (CPs)

- ▶ Windows 7 Professional or Windows Server 2008 (32-bit or 64-bit) or later
- ▶ Dedicated virtual machine server or workstation
- ▶ Intel 2.6 GHz or faster
- ▶ Multi-core enabled with a minimum of 2 and maximum of 8 cores
- ▶ 8 GB to 16 GB RAM
- ▶ 40 GB available hard drive space
- ▶ Unlimited users if using Windows Server; up to 10 users if using Windows Desktop

From 35 to 200 Control Processors (CPs)

- ▶ Server-grade machine
- ▶ Windows Server 2008 R2 (64-bit) or later
- ▶ Dedicated virtual machine server
- ▶ Intel 3.0 GHz or faster
- ▶ Multi-core enabled with a minimum of 8 and a maximum of 16 cores
- ▶ 16 GB to 32 GB RAM
- ▶ 100 GB available hard drive space (RAID 0, 5, or 10 recommended)
- ▶ Unlimited users if using Windows Server

System Auditor Client

- ▶ Windows 7/2008 or later
- ▶ Intel 1.5 GHz or faster
- ▶ 2 GB RAM or greater
- ▶ 100 MB available hard drive space
- ▶ 1280 x 1024 monitor resolution

NOTE

Systems with more than 200 CPs require multiple servers.

You can share System Auditor with other applications that do not interact with MySQL. However, to maintain performance, other applications cannot use the system resources required for System Auditor. For example, if an application requires 2 CPUs and 8 GB of RAM, you'll need to plan for those in addition to the resources required for System Auditor.

System Auditor does not require excessive maintenance, but if it is shared with another application that requires regular maintenance, then System Auditor's cost and availability is affected. Therefore, we recommend you use a dedicated server for System Auditor.